Shattuck Superfund Site

Summer 2003 Update

U.S. Environmental Protection Agency, Region 8 **September 2003**

THIS FACT SHEET will update readers on EPA cleanup actions at the S.W. Shattuck Chemical Company Superfund site (Shattuck) at 1805 S. Bannock Street in Denver, Colorado (see **Figure 1**).

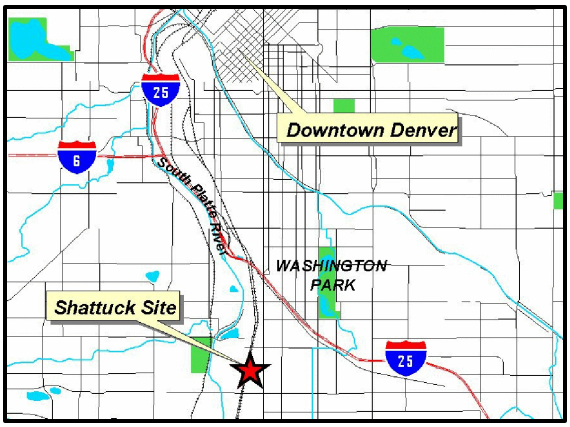


Figure 1. Site Location Map

SITE OPERATIONS

With the successful move of the Mining Structure to Setup 2, monolith demolition is again underway. Heavy equipment, including two excavators with hydraulic hammers, another excavator, and a front end loader, breaks up the monolith and loads the conveyor belt that carries the waste material to the Loadout Structure (see **Figures 2** and **3**).

Figure 2. Excavated Area inside Mining Structure (Setup 1) with Vertical Face of the Monolith (left side).

Figure 3. Loading Material onto Conveyor (Mining Structure).

Loadout operations load up to five rail cars a day with up to 108 tons of waste material in each rail car (see **Figure 4**). The railroad pulls out up to 20 rail cars a week from the Shattuck rail spur. Fifteen percent of the waste has been removed from the site in 300 rail cars as of August 28, 2003.

Figure 4. Loadout Operations (Loadout Structure).

Site workers now have a better working environment in the Mining and Loadout Structures. Soot filters and a purifying exhaust muffler installed on the heavy equipment reduce particulate and carbon monoxide

emissions as well as dust levels. Fan filter life is also longer.

A Fog Cannon™ was successfully tested to reduce dust generation, prolong filter life, and increase visibility and safety. The Fog Cannon™ is a specially engineered dust suppression system to control airborne particles. It has advantages over a conventional water nozzle because it forms microscopic water droplets to readily knock down dust. It has the additional advantage of keeping the amount of water added to the monolith mining operations to a minimum. The small amount of water added stays with the broken monolith material and goes out on the rail cars to the disposal facility. A Fog Cannon™ is on order, and a rental unit will be in use until delivery.

Pre-verification soil sampling prior to the Mining Structure move used a grid system based on the *Construction Completion Report* from the first Shattuck remedy. The sampling covered 100 percent of the excavated area. Sample results were analyzed and compared to the 2000 Record of Decision Amendment cleanup criteria. The sample data submitted to the Corps of Engineers resulted in approval on June 17, 2003, to relocate the Mining Structure.

MINING STRUCTURE RELOCATION

The monolith's exposed working face was covered with geosynthetic material from June 18 to July 23, 2003, during the Mining Structure relocation. Applicable health and safety and radiological monitoring continued during relocation. Following engineering preparations, which included slacking the four fabric links between the modules and installing the south wall extensions of the Mining Structure (see **Figure 5**), the five modules of the Mining Structure were moved simultaneously up to 75 feet north to the second setup position.

Figure 5. Typical South Wall of Each Mining Structure Module.

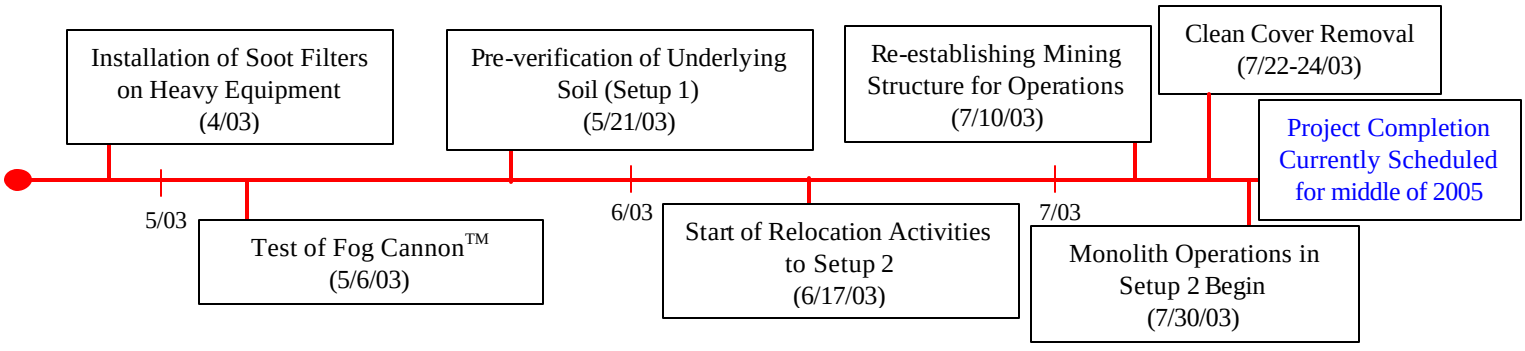
Re-tensioning of the fabric links and replacement of the link between Modules D and E (the link was ripped in the March 2003 blizzard and temporarily repaired) made the Mining Structure ready for operations on July 22, 2003.

Clean cover removal at Setup 2 also was completed on July 24, 2003 (see **Figure 6**). Monolith mining operations resumed the week of July 28, 2003.

Figure 6. Clean Cover Material Removal (Setup 2).

SAFETY MONITORING

As required by the site and community health and safety plans, perimeter and personnel monitoring operates at the site.



As of April 2003 (the most recent quality-checked data), the sitewide cumulative annual radiological dose is 0.4 millirems, which is substantially less than the NESHAP regulatory limit of 10 millirems. Sitewide non-radiological metal measurements for lead, arsenic, and selenium continue to show minimal levels that are much less than national air quality standards.

Eight on-site high volume air samplers and pumps monitor air at the site perimeter continuously 24 hours a day, seven days a week. For comparison, an off-site background high volume air sampler and pump at the Englewood Golf Course also runs continuously. A background PM-10 dust monitor runs 24 hours a day, seven days a week, and work area PM-10 dust monitors operate during intrusive activities on-site (i.e. monolith mining and loadout).

EPA conducts a radon monitoring program at the site. Radon monitors are located below the Mining Structure filter exhausts including positions at the breathing height of a person.

Personnel monitoring during intrusive activities includes thermoluminescent, radon, and noise dosimeters, sampling for site radionuclides, heavy metals such as lead and arsenic, silica, ammonia, nitrogen dioxide, and carbon monoxide.

Vibration monitoring is also being conducted at the site perimeter.

SITE SECURITY

The site has a security guard 24 hours a day, seven days a week. In addition, a security monitoring system operating at the site includes an electronic card reader system for check points around the site and a security camera along the Shattuck site railroad spur.

UPCOMING EVENTS – FALL 2003

Site operations including monolith mining and waste shipments will continue on schedule.

The Final Status Survey for Setup 1 excavated area will be performed.

FOR SITE AND PROJECT INFORMATION

Visit the **EPA Shattuck web site:**

http://epa.region8/superfund/shtk/shattuck.html

Visit one of the **Information Repositories** listed on the back page.

FOR INFORMATION ABOUT SHATTUCK CITIZEN ADVISORY GROUP MEETINGS

Contact: Rob Henneke, EPA, (303) 312-6734.

FOR MORE INFORMATION

Contact an agency representative listed on the back page.

ABOUT THE SITE

The Shattuck site is about 6 acres of S.W. Shattuck Chemical Company property.

The original Record of Decision (ROD) was signed in January 1992. In it, EPA selected on-site stabilization and solidification in the form of a monolith as the remedy for the soils and natural attenuation for ground water.

EPA conducted a five-year review of the Shattuck site and found site-specific deficiencies in the monolith cover design, the structural and chemical integrity of the monolith, and the monolith's compliance program. Based on these findings, EPA could not be assured of the long-term protection of the original remedy.

On June 16, 2000, EPA selected off-site removal in a ROD Amendment because it best met Superfund's nine evaluation criteria. EPA will remove the contaminated soil and monolith to U.S. Ecology, a permitted facility in Grandview, Idaho.

Benefits of Off-site Disposal:

- Removes uncertainties concerning the long-term protection of human health and the environment;
- Allows for unrestricted land use upon remedy completion; eliminates reliance on land-use restrictions;
- Removes source material that could potentially contribute to future ground water contamination; and
- Disposes of material in a permitted facility, which will be most protective of human health and the environment.

Information Repositories

Documents related to the Shattuck site clean-up process are available for public review at the following locations:

EPA Superfund Records Center
South Tower, 3rd Floor (check-in)
999 18th Street
Denver, Colorado 80202
Monday-Friday 8:00-4:30
(303) 312-6473

Colorado Department of Public Health and Environment
Record Center, B Building, 2nd Floor
4300 Cherry Creek Drive South
Denver, Colorado 80246
Monday-Friday 8:00-5:00
(303) 692-3331

Decker Branch, Denver Public Library
1501 South Logan Street, Denver, Colorado 80210
Monday 10:00-8:00; Tuesday 12:00-8:00; Wednesday, Thursday, Saturday 10:00-5:30; Friday, Sunday closed
(303) 733-7584

For More Information Contact:

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